

# EVALUATING ENVIRONMENTAL RISKS IN CHILDREN DIAGNOSED WITH SOLID TUMORS: SINGLE INSTITUTION STUDY

Robin Rohrer, *University of Pittsburgh, USA*

**Background and aims:** The determination of impact of environmental exposures in the epidemiology of childhood cancers is especially challenging but crucial in the twenty first century. Although cure rates in children's cancers are rising (particularly those of acute lymphoblastic leukemia) there are several pediatric cancers such as brain tumors, neuroblastoma and acute myelogenous leukemia which are only 50% curable or less. Especially alarming is fact that the diagnosis of childhood cancers is slightly increasing and that proportionally hard to treat tumors of the central nervous system are rising in numbers. This study examines the incidence of possible toxic environmental exposures in a cohort of children diagnosed with a solid tumor at the Children's Hospital of Pittsburgh from 1995-2010.

**Method:** The author used oral interview with families/caregivers to examine preconception, in utero and early childhood exposures to pesticides, other chemical exposures, non ionizing and ionizing radiation including medical radiation, electro magnetic fields and proximity to nuclear power installations.

**Results:** The caregiver interviews yielded that there were multiple exposures particularly in utero and in early childhood. Highest among these exposures were to pesticides and medical radiation as part of diagnostic workups.

**Conclusions:** The study reports that there were multiple exposures to possible carcinogens in this cohort of children diagnosed with solid tumors including tumors of the central nervous system. Further study of the results and the extension of the study to previous decades (1970-1995) would enable the author to better link these exposures to diagnosed children retrospectively.